

1. (Currently Amended) [[a]] A device for infusion therapy comprising:  
a balloon catheter;  
a guide wire to be inserted into a guide lumen of the balloon catheter;  
pulsation detection means for detecting pulsation of the heart; and  
stroke means for causing said guide wire to stroke in synchronization with the pulsation of the heart based on a detection signal of the pulsation detection means,  
wherein said balloon catheter is a balloon catheter for insertion into a blood vessel in which a plurality of lumens extending along an axis are formed in one catheter body, and two expandable balloons expand expanding toward outside with respect to the catheter body are arranged axially in parallel, and the balloon catheter previously combined with the guide wire is inserted into a coronary vein in reverse of the blood flow and adjusted so that a blood vessel area surrounding the lesion is placed between the two balloons, and wherein characterized in that said plurality of lumens comprises:  
an infusion lumen that has an infusion hole communicating with an outside of the catheter body between said two balloons, and can supply drugs, cells, a treatment instrument, or the like to the outside of the catheter body through said infusion hole;  
balloon lumens that communicate with insides of said two balloons to control expansion of said balloons;  
a bypass lumen that communicates with the outside of the catheter body in each position distal and proximal, which is outside of said two balloons with respect to a tip of the catheter body, and bypasses an occluded area formed by the two balloons to allow blood flow; and  
a guide lumen into which a guide wire that guides the catheter body to a target position is inserted, and  
    said guide lumen communicating communicates with the outside of the catheter body in each position distal and proximal, which is outside of said two balloons to also serve as said bypass lumen, having one or more bypass holes in a position closer to a tail end than the two balloons.

2. (Currently Amended) A device for infusion therapy according to claim

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1, ~~characterized in that~~ wherein one balloon lumen communicates with the insides of said two balloons.

3. (Cancelled).

4. (Currently Amended) A device for infusion therapy according to claim

1, ~~characterized in that~~ wherein said device is a catheter for insertion into a coronary vein.

5. (Cancelled).